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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/919,947	08/29/1997	RICHARD J. RICHARDSON	310030-234	7955

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EXAMINER
WARD, JOHN A

ART UNIT	PAPER NUMBER
2875	

DATE MAILED: 05/07/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	08/919,947	RICHARDSON, RICHARD J.	
	Examiner	Art Unit	
	John A. Ward	2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 January 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *81-118* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *81-118* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *28* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 81, 88, 89, 91 and 93 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amstutz et al (US 4,955,044) in view of Yoon et al (US 6,031,338)

Regarding claims 81, 88-89, and 91, Amstutz et al ('044) discloses a lighted display case comprising of an integral frame work 16 (line 21, column 3), rear sliding doors 28 (line 23, column 3), a fluorescent lamp 96, a fluorescent tube socket 98 extending from the mainframe 101 (figure 19, 20), in addition to an electrical cord 36 and a wiring assembly 38 (lines 45-46, column 3).

Amstutz et al does not disclose electronic ballast that operates above 200 volts.

Regarding claim 81 Yoon et al ('338) discloses an electronic ballast method and apparatus and coupling therefore comprising of a frame element 24, a door 22 to receive the frame element inside a refrigerated display case 20 (lines 55-60, column 3). Electronic ballast 32, having an operating voltage of 95-277 volts, and a operating frequency of 80khz that is produced by the lamp driving circuit 38 (lines 25-26, column 6).

Regarding claim 93, the ballast 32 has an operating temperature of – 60 degrees Celsius and to 100 degrees Celsius (lines 11-18, column 2).

Yoon et al does not disclose the lamp socket forming an electrical bridge having a surface area of at least 0.008 square inch.

Amstutz in view of Yoon et al discloses all the limitations of the claimed invention except for the surface area of the contact of the lamp socket of at least 0.008 square inch.

It would have been obvious matter of design choice to make a surface area of the electrical conductor to be 0.008 square inches, since applicant has not disclosed that the dimension of the electrical conductor is critical to the claimed invention and solves any problem that have established in the specifications.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the lighted display of Amstutz et al with the electronic ballast of Yoon et al in order to provide a low cost ballast that can be used in a low temperature storage device.

Claims 82-87, 90, 92, 94-97 and 99 are rejected under 35 U.S.C. 103(a) as being unpatentable over Amstutz et al in view of Yoon et al as applied to claim 81 above, and further in view of Kelman (US 2,522,044).

Regarding claim 82, Amstutz et al in view of Yoon et al discloses all the limitations of the claim except the physical description of the fluorescent lamp socket

Regarding claim 82, Kelman ('044) discloses a fluorescent light socket comprising of contact fingers 45 with arcuate shape of the surface, longitudinal connection movement with the lamp 11 (figure 1).

Regarding claims 83-84, 87, and 92, the socket of Kelman have a hollow–cylindrical shape for accepting the pin contact of the fluorescent lamp 11 (figure 1) and covering the pins by at least 50 percent (figure 5), a split sleeve contacts 41, 40 that connect to the lamp (figure 6, 11) which can be mounted by screws or solder (both methods are old and well known in the art).

Regarding claim 90, at least one pin connector and at least one mating hollow cylindrical connector and wherein the connectors are enclosed in a plastic housing 40 (column 5, lines 3-12).

Regarding claims 85-86, the pins of the socket engage the lamp over the last 180 degrees of circumferential surface of the lamp pins (lines 50-53, column 3).

Kelman does not disclose the surface area of the contact of the lamp socket of at least 0.008 square inch.

Regarding claim 94-97, and 99, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a surface area of at least 0.01-0.07 square inch and a electrical conductor of at least 16 gauge, since it is old and well know in the art by increasing the amount of surface area of an electrical conductor of electricity allows a greater amount of current to flow through that conductor

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the fluorescent of Amstutz et al with the electronic

ballast of Yoon et al and the socket of Kelman in order to provide a fluorescent lamp installed in the fresh food compartment that can handle temperatures at and below freezing as taught by Yoon et al (column 3, lines 44-67).

Claims 100-108, and 110-117 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mamelson et al (US 5,471,372) in view of Yoon et al ('338) and in view of Robertson (US 5,904,415).

Regarding claim 100, Mamelson ('372) discloses a discloses a refrigerated display case comprising of a frame 12, at least on product support 30 within the area to be refrigerated, a pair of insulated glass doors 11a, 11b so that any product supported on the product support is shown on the outside of the display (figure 1). A light source 40 supported relative to the frame to illuminate the product on the product support (claim 1), and at least one sockets (not shown) that is attached to the light source 40 having cylindrical contacts 41.

Regarding claim 101, the light source 40 is supported by a support 35, 36 mounted to the frame 12.

Regarding claim 102, and 104, the support 36 is attached to a mullion 14.

Regarding claim 105 and 106, a releasable junction 18 having a portion that is integral with at least one socket 38 (column3, lines 53-66).

Regarding claim 107, a housing 60 surrounding a portion at least on electrical conductor (figure 6).

Regarding claim 108, at least one socket 38 includes a connector 41 and the socket includes a connector housing 60 surrounding a portion of the connector for engaging the housing on the releasable junction (column 3, line 53-66).

Regarding claim 111, figure 6 show that the opening is adjacent to the socket 38.

Regarding claim 100, Yoon et al ('338) discloses an electronic ballast method and apparatus and coupling therefore comprising of a frame element 24, a door 22 to receive the frame element inside a refrigerated display case 20 (lines 55-60, column 3). Electronic ballast 32, having an operating voltage of 95-277 volts, and a operating frequency of 80khz that is produced by the lamp driving circuit 38 (lines 25-26, column 6). The ballast 32 has an operating temperature of –60 degrees Celsius and to 100 degrees Celsius (lines 11-18, column 2).

Yoon et al does not disclose the cylindrical fluorescent light and socket not the dimensions of the socket it is attached to.

Regarding claim 112, and 113, Robertson et al ('415) discloses a fluorescent bulb connector assembly comprising of a cylindrical fluorescent lamp 300, a first and second socket 203, 204, by means of the connector 100 to hold the lamp (figure 1), along with making electrical contact with the lamp. Figure 3 disclose how the socket hollow sections 104, 105 for engaging the pins 303, 304 on the lamp making electrical contact (lines 45-49, column 4).

The hollow section as seen in figure 3, will also cover over 50 percent of the pins on the lamp, the housing around the connector and socket 101 are made of heat resistant plastic (lines 35-37, column 5), the socket 103 has electrical wires 112 that are

connected to the sockets in order to provide an electrical connection between the receiving housing 203 and the socket.

Yoon et al does not disclose the lamp socket forming an electrical bridge having a surface area of at least 0.008 square inch.

Regarding claim 100, Yoon et al in view of Robertson et al discloses all the limitations of the claimed invention except for the surface area of the contact of the lamp socket of at least 0.008 square inch. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a surface area of at least 0.008 square inch since it is old and well know in the art by increasing the amount of surface area of an electrical conductor of electricity allows a greater amount of current to flow through that conductor.

It is old and well known in the art to uses at least 16 gauge wire for providing electrical conduction to a lamp socket due to its dimension and ability to conduct electricity. It is also old and well known in the art to provide a connector with the dimensions of greater than 0.07 square inch in a fluorescent T-8 bulb socket.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the ballast of Yoon et al, that can be operable in a refrigerated area, with the fluorescent of Robertson et al, in order to provide a light source that can be used in a refrigerated display case over a given temperature range as disclosed in the abstract of Yoon et al.

Claim 118 is rejected under 35 U.S.C. 103(a) as being unpatentable over Amstutz et al in view of Yoon et al.

Amstutz et al ('044) discloses a lighted display case comprising of an integral frame work 16 (line 21, column 3), rear sliding doors 28 (line 23, column 3), a fluorescent tube socket 98 extending from the mainframe 101 (figure 19, 20), and electrical cord 36 and wiring assembly 38 (lines 45-46, column 3).

Amstutz et al does not disclose electronic ballast that operates above 200 volts.

Yoon et al ('338) discloses an electronic ballast method and apparatus and coupling therefore comprising of a frame element 24, a door 22 to receive the frame element inside a refrigerated display case 20 (lines 55-60, column 3). Electronic ballast 32, having an operating voltage of 95-277 volts, and a operating frequency of 80khz that is produced by the lamp driving circuit 38 (lines 25-26, column 6). The ballast 32 has an operating temperature of –60 degrees Celsius and to 100 degrees Celsius (lines 11-18, column 2).

Yoon et al does not disclose the lamp socket forming an electrical bridge having a surface area of at least 0.008 square inch.

Amstutz in view of Yoon et al discloses all the limitations of the claimed invention except for the surface area of the contact of the lamp socket of at least 0.008 square inch. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a surface area of at least 0.008 square inch since it is old and well know in the art by increasing the amount of surface area of an electrical conductor of electricity allows a greater amount of current to flow through that conductor.

Therefore it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the lighted display of Amstutz et al with the electronic ballast of Yoon et al in order to provide a low cost ballast can be used in a low temperature storage device.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to John A. Ward whose telephone number is 703-305-5157. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on 703-305-4939. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9318 for regular communications and 703-872-9319 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0596.

JAW
May 5, 2003

John A. Ward
Patent Examiner AU 2875